

REMARKS

The applicant has carefully reviewed the Examiner's comments in the Non-Final Office Action ("Action") dated March 31, 2009.

Status of the Claims

Claims 1-19 are pending. Claims 2, 3, 5-11, 13, 14, 16, 18, and 19 are original. Claims 4 and 15 were previously presented. Claims 1, 12, and 17 are currently amended to improve form. Support for these claims can be found in Paragraph 9, Lines 23-27, of the Specification. No new matter is added.

Claim Objections

Claims 1, 12, and 17 are objected to because of informalities. The claims are amended to correct the informalities. In particular, claims 1, 12, and 17 now recite "the" return message instead of "a" return message. No new matter is added.

Claim Rejections

Claims 1-3, 5, 7-9, 11-13, 16-19 are rejected under 35 USC §103(a) as being unpatentable over published US Patent Application US2005/0147107 A1 to Powers et al. (hereinafter "Powers") in view of published US Patent Application US 2002/0012320 A1 to Ogier et al. (hereinafter "Ogier"). Claim 4 is rejected under 35 USC §103(a) as being unpatentable over Powers in view of Ogier, and further in view of issued Japanese Patent JP401101751A to Ootake et al (hereinafter "Ootake"). Claim 10 is rejected under 35 USC §103(a) as being unpatentable over Powers in view of Ogier, and further in view of issued US Patent 4,745,593 to Stewart et al (hereinafter "Stewart").

Powers in combination with Ogier fails to teach or suggest the claimed subject matter

Applicants hereby traverse the rejections of claims 1, 12 and 17, under 35 USC §103(a) and respectfully request reconsideration thereof in view of the remarks set forth below.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In *re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In *re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In *re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 1, 12, and 17 recite a method and systems for improving network availability in *a segmented network*. The segmented network includes a *source network segment or a first network segment* having a source node and *a destination network segment or a second network segment* having a plurality of destination nodes. A test message is periodically transmitted over a plurality of communication links *from the source node to each of the plurality of destination nodes*. For each of the plurality of destination nodes, a return message *for transmitting to the source node* is generated if the test message is received. The status of each of the plurality of communication links in response to the return messages is determined *at the source node* and the determined status is transmitted from *the source node in the source network segment* to each of the plurality of destination nodes *in the destination network segment*.

The Office action rejected claims 1, 12, and 17 under 35 USC §103(a) over Powers in view of Ogier. The Action admits that Powers does not disclose (1) determining the status of each of the plurality of communication links in response to the return message generated by plurality of nodes and (2) transmitting the determined status of each of the plurality of communication links from the source node to each of the plurality of destination nodes that generated the return message. The Action relies on the disclosure of Ogier for these steps (Office Action, Page 3).

Applicant respectfully submits, however, that the cited prior art, including Powers in combination with Ogiers, does not teach, describe, or suggest a method or systems for improving network availability as recited in claims 1, 12, and 17. In particular, Powers in combination with Ogiers does not teach, describe, or suggest a method for "determining, at the source node in the source network segment the status of each of the plurality of communication links in response to the

return messages generated by the plurality of destination nodes in the destination network segment” and “transmitting the determined status of each of the plurality of communication links from the source node in the source network segment to each of the plurality of destination nodes in the destination network segment that generated the return message,” as recited in Applicant’s claim 1.

Applicant’s claimed subject matter improves local area network (LAN) availability in network segment-to-segment communication paths. As recited in claims 1, 12, and 17, the source node in the source network segment determines the status of the plurality of communication links in response to return messages received from a plurality of destination nodes in the destination network segment.

In contrast, Powers does not address improving network availability of networks in which a given node is not aware *a priori* of the status of the other nodes, which is frequently the case in a LAN. Furthermore, as admitted in the Action, Powers does not teach, describe or suggest a method or systems for determining the status of communication links at a source node in a source network segment.

Ogier fails to make up for the lack of teaching or suggestion in Powers. In particular, Ogier is directed to the dissemination of the network topology or link status only within a particular subnet (i.e., network segment) of the network (Ogier, Paragraphs 53 and 54). Ogier is not interested in, and does not teach, describe, or suggest any communication from one network segment to another, different network segment. For instance, in FIG. 1 of Ogier, each router 14 in the subnet 10 is responsible for tracking its neighbor nodes’ link status and disseminating network topology only within the subnet 10. The routers 14 in the first subnet in FIG. 2 do not communicate with the routers 14 in the second subnet 20. Therefore, there are no test messages relating to link status communicated from subnet 10 (i.e., a first network segment) to subnet 20 (i.e., a second network segment). In fact, there is no teaching, description, or suggestion in Ogier’s mobile ad-hoc networks (MANETs), for the routers in different subnets (i.e., network segments) to communicate with one another. If one of ordinary skill in the art were to apply the teachings of Ogier to Powers, the result would be a source node in a source network segment aware of the link status of the source

network segment. However, the source node would in no way, shape, or form have knowledge of the link status of any destination nodes in the destination network segment.

Therefore, the combination of Powers and Ogier fails to describe, teach or suggest a method for “determining, at the source node in the source network segment the status of each of the plurality of communication links in response to the return messages generated by the plurality of destination nodes in the destination network segment” and “transmitting the determined status of each of the plurality of communication links from the source node in the source network segment to each of the plurality of destination nodes in the destination network segment that generated the return message,” as recited in Applicant’s claim 1. Claims 12 and 17 recite similar subject matter, and for at least these reasons, Powers and Ogier fails to describe, teach or suggest the claimed subject matter of claims 12 and 17.

For at least these reasons, Applicant respectfully submits that the Examiner has failed to make a *prima facie* case of obviousness, as required by MPEP §2143, and rejections of claims 1, 12, and 17 under 35 USC §103(a) should be withdrawn. As claims 2-11, 13-16, 18, and 19 depend from, and add limitations to, these independent claims, the 35 USC §103(a) rejections of these claims should be withdrawn, too.

CONCLUSION

In view of the above amendments and remarks, Applicant respectfully request the reconsideration of this application, and timely allowance of pending claims.

Applicants hereby request a telephonic interview with the Examiner if she believes the case not to be in condition for allowance.

Applicant believes no fee is due with this response other than those indicated on the attached Transmittals. However, if a fee is due, please charge our Deposit Account No. 18-1945 from which the Undersigned is authorized to draw.

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Respectfully submitted,

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